

In re Patent Application of:  
**JONES ET AL.**  
Serial No. 10/629,449  
Filed: JULY 29, 2003

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In the Claims:

This listing of claims replaces all prior versions and listings of claims in the application.

1. (Currently amended) A method of conducting wireless packetized digital data communications between a data sourcing site and a data reception site, geographically remote with respect to one another, said method comprising:

(a) providing a communication path between said data sourcing site and said data reception site, said communication path including at least one relay therebetween, such that said communication path, said sourcing site, and said reception site contain at least three successive transceiver devices, wherein each pair of immediately successive transceiver devices includes a data transmission device and a data reception device;

(b) selectively wirelessly transmitting a polling message to said data transmission device from said data reception device;

(c) in response to receipt of said polling message, wirelessly transmitting, from said data transmission device to said data reception device, a poll acknowledgement message that is representative of whether said data transmission device has data to send and the quantity of data to be sent;

(d) in response to receipt of said poll acknowledgement message indicating that said data transmission device has data to send, wirelessly transmitting, from said data reception device to said data transmission device, a data request message;

(e) in response to receipt of said data request

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message, wirelessly transmitting, from said data transmission device to said data reception device, a data message containing a plurality of data packets;

(f) in response to receipt of said data message at said data reception device, storing data contained in data packets of said data message, storing data contained in a respective group of data packets in an associated data buffer of a group storage section of a memory of said data reception device, and storing information representative of any data packets missing from said data message in a resend buffer of said group storage section of said memory of said data reception device; and

(g) wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that includes said information representative of any data packets missing from said data message, and assembling said data acknowledgement message in accordance with the contents of said resend buffer of said group storage section of said memory of said data reception device; and

(h) subsequent to receipt of said data acknowledgement message, wirelessly transmitting, from said data transmission device to said data reception device, at least one further data message containing data packets missing from said data message transmitted in step (e).

2. (Original) The method according to claim 1, wherein step (g) comprises wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that requests said data transmission

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device to transmit all packets except for specifically identified packets.

3. (Original) The method according to claim 1, wherein step (g) comprises wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that requests said data transmission device to retransmit only specifically identified packets and fill the remainder of the data message with new packets.

4. (Original) The method according to claim 1, wherein step (g) comprises wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that requests said data transmission device to retransmit all packets of the last data message.

5. (Canceled).

6. (Currently amended) The method according to claim 1 ~~claim 5~~, wherein said data acknowledgement message transmitted in step (g) includes information that indicates whether said at least one further data message is to be immediately transmitted, and wherein step (h) comprises, in the absence of information indicating that said at least one further data message is to be immediately transmitted, waiting until receipt of a further poll message and a further data request message before wirelessly transmitting, from said data transmission device to said data reception device, said at least one further data message containing said data packets missing

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from said data message transmitted in step (e).

7. (Currently amended) The method according to claim 1 ~~claim 5~~, wherein said data acknowledgement message transmitted in step (g) includes information that indicates whether said at least one further data message is to be immediately transmitted, and wherein step (h) comprises, in response to information indicating that said at least one further data message is to be immediately transmitted, wirelessly transmitting, from said data transmission device to said data reception device, said at least one further data message containing said data packets missing from said data message transmitted in step (e).

8. (Canceled).

9. (Canceled).

10. (Currently amended) The method according to claim 2, wherein step (h) includes storing, in a resend packet buffer, those data packets that were identified in said data acknowledgement message as missing from said data message transmitted in step (e), and assembling said at least one further data message for wireless transmission to said data reception device in accordance with the contents of said resend packet buffer.

11. (Canceled)

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12. (Canceled).

13. (Canceled).

14. (Canceled).

15. (Canceled).

16. (Canceled).

17. (Canceled).

18. (Canceled).

19. (Currently amended) A method of conducting wireless packetized digital data communications between a data sourcing site and a data reception site, geographically remote with respect to one another, said method comprising:

(a) providing a communication path between said data sourcing site and said data reception site, said communication path including at least one relay therebetween, such that said communication path contains at least three successive transceiver devices, wherein each pair of immediately successive transceiver devices includes a data transmission device and a data reception device;

(b) selectively wirelessly transmitting a polling message to said data transmission device from said data reception device;

(c) in response to receipt of said polling message,

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wirelessly transmitting, from said data transmission device to said data reception device, a poll acknowledgement message that is representative of whether said data transmission device has data to send and the quantity of data to be sent;

(d) in response to receipt of said poll acknowledgement message indicating that said data transmission device has data to send, wirelessly transmitting, from said data reception device to said data transmission device, a data request message;

(e) in response to receipt of said data request message, wirelessly transmitting, from said data transmission device to said data reception device, a data message containing a plurality of data packets;

(f) in response to receipt of said data message at said data reception device, storing data contained in data packets of said data message, ~~and~~ storing information representative of any data packets missing from said data message by at least storing data contained in a respective group of data packets in an associated data buffer of a group storage section of a memory of said data reception device, and storing said information representative of any data packets missing from said data message in a resend buffer of said group storage section of said memory of said data reception device;

(g) wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that includes said information representative of any data packets missing from said data message by at least assembling said data acknowledgement message in accordance with the contents of said resend buffer of said group storage section

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of said memory of said data reception device; and

(h) subsequent to receipt of said data acknowledgement message, wirelessly transmitting, from said data transmission device to said data reception device, at least one further data message containing data packets missing from said data message transmitted in step (e).

20. (Previously presented) The method according to claim 19, wherein step (g) comprises wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that requests said data transmission device to transmit all packets except for specifically identified packets.

21. (Previously presented) The method according to claim 19, wherein step (g) comprises wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that requests said data transmission device to retransmit only specifically identified packets and fill the remainder of the data message with new packets.

22. (New) A method of conducting wireless packetized digital data communications between a data sourcing site and a data reception site, geographically remote with respect to one another, said method comprising:

(a) providing a communication path between said data sourcing site and said data reception site, said communication path including at least one relay therebetween, such that said

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communication path, said sourcing site, and said reception site contain at least three successive transceiver devices, wherein each pair of immediately successive transceiver devices includes a data transmission device and a data reception device;

(b) selectively wirelessly transmitting a polling message to said data transmission device from said data reception device;

(c) in response to receipt of said polling message, wirelessly transmitting, from said data transmission device to said data reception device, a poll acknowledgement message that is representative of whether said data transmission device has data to send and the quantity of data to be sent;

(d) in response to receipt of said poll acknowledgement message indicating that said data transmission device has data to send, wirelessly transmitting, from said data reception device to said data transmission device, a data request message;

(e) in response to receipt of said data request message, wirelessly transmitting, from said data transmission device to said data reception device, a data message containing a plurality of data packets;

(f) in response to receipt of said data message at said data reception device, storing data contained in data packets of said data message, and storing information representative of any data packets missing from said data message;

(g) wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that includes said information representative of any



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data packets missing from said data message; and

(h) subsequent to receipt of said data acknowledgement message, wirelessly transmitting, from said data transmission device to said data reception device, at least one further data message containing data packets missing from said data message transmitted in step (e), said data acknowledgement message transmitted in step (g) including information that indicates whether said at least one further data message is to be immediately transmitted, and in the absence of information indicating that said at least one further data message is to be immediately transmitted, waiting until receipt of a further poll message and a further data request message before wirelessly transmitting, from said data transmission device to said data reception device, said at least one further data message containing said data packets missing from said data message transmitted in step (e).

23. (New) The method according to claim 22, wherein step (f) comprises storing data contained in a respective group of data packets in an associated data buffer of a group storage section of a memory of said data reception device, and storing said information representative of any data packets missing from said data message in a resend buffer of said group storage section of said memory of said data reception device.

24. (New) The method according to claim 23, wherein step (g) comprises assembling said data acknowledgement message in accordance with the contents of said resend buffer of said group storage section of said memory of said data reception

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device.

25. (New) A method of conducting wireless packetized digital data communications between a data sourcing site and a data reception site, geographically remote with respect to one another, said method comprising:

(a) providing a communication path between said data sourcing site and said data reception site, said communication path including at least one relay therebetween, such that said communication path, said sourcing site, and said reception site contain at least three successive transceiver devices, wherein each pair of immediately successive transceiver devices includes a data transmission device and a data reception device;

(b) selectively wirelessly transmitting a polling message to said data transmission device from said data reception device;

(c) in response to receipt of said polling message, wirelessly transmitting, from said data transmission device to said data reception device, a poll acknowledgement message that is representative of whether said data transmission device has data to send and the quantity of data to be sent;

(d) in response to receipt of said poll acknowledgement message indicating that said data transmission device has data to send, wirelessly transmitting, from said data reception device to said data transmission device, a data request message;

(e) in response to receipt of said data request message, wirelessly transmitting, from said data transmission device to said data reception device, a data message containing

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a plurality of data packets;

(f) in response to receipt of said data message at said data reception device, storing data contained in data packets of said data message, and storing information representative of any data packets missing from said data message;

(g) wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that includes said information representative of any data packets missing from said data message; and

(h) subsequent to receipt of said data acknowledgement message, wirelessly transmitting, from said data transmission device to said data reception device, at least one further data message containing data packets missing from said data message transmitted in step (e), said data acknowledgement message transmitted in step (g) including information that indicates whether said at least one further data message is to be immediately transmitted, and in response to information indicating that said at least one further data message is to be immediately transmitted, wirelessly transmitting, from said data transmission device to said data reception device, said at least one further data message containing said data packets missing from said data message transmitted in step (e).

26. (New) The method according to claim 25, wherein step (f) comprises storing data contained in a respective group of data packets in an associated data buffer of a group storage section of a memory of said data reception device, and storing said information representative of any data packets missing from

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said data message in a resend buffer of said group storage section of said memory of said data reception device.

27. (New) The method according to claim 26, wherein step (g) comprises assembling said data acknowledgement message in accordance with the contents of said resend buffer of said group storage section of said memory of said data reception device.